

REMARKS

In accordance with the foregoing, the specification and claims 8, 12, 13, 15-17, 19-28, and 30-39 are amended. New claims 40-42 are presented. Claims 1-7, 18 and 29 are cancelled without prejudice or disclaimer.

ITEM 3: OBJECTION TO CLAIMS 12-16, 18, 23-24, 26-27, 29, 34-35, AND 37-38

The Examiner objects to claims 12-16, 18, 23-24, 26-27, 29, 34-35, and 37-38 because of informalities. (Action at page 2). Claims 18 and 29 are cancelled herein without prejudice or disclaimer. Claims 12-16, 23-24, 26-27, 34-35, and 37-38 are amended herein as suggested by the Examiner to replace the term --branch-- with "branch." Withdrawal of the rejection allowance or the claims is requested.

ITEM 4: OBJECTION TO CLAIM 18

Claim 18 is cancelled herein without prejudice or disclaimer and withdrawal of the objection is requested.

ITEM 5: OBJECTION TO CLAIM 19

Claim 19 is objected to as being in improper form, as dependent upon itself. (Action at page 3). Claim 19 is amended herein to so as to be dependent on claim 23. Withdrawal of the rejection and allowance or the claims is requested.

ITEM 7: REJECTION OF CLAIMS 1, 18, AND 29**ITEM 9: REJECTION OF CLAIMS 1-7, 18, AND 29**

Claims 1-7, 18, and 29 are cancelled herein without prejudice or disclaimer and withdrawal of the rejection is requested.

Alexander, III et al. discusses identifying a periodically occurring event and obtaining a call stack associated with an active thread at a time of the event. (See, for example, col. 2, starting at line 42).

Smolders discusses counting various events from a running program by taking a trace by way of using an interruption. (See, for example, col. 2 starting at line 5).

Alexander in view of Smolders discusses identifying a periodically occurring event and checking if an instruction is a branch instruction.

Applicants submit that none of the cited art teach or discuss judging whether an executed branch instruction is an instruction relating to execution of a subroutine. While Smolders does discuss checking whether an instruction is a branch instruction, Smolders does not identify a type of branch instruction.

ITEM 9: REJECTION OF CLAIMS 8-17 UNDER 35 U.S.C. §103(a) UNDER ALEXANDER, III ET AL. (U.S.P. 6,002,872) IN VIEW OF SMOLDERS (U.S.P. 6,253,338)

The Examiner rejects independent claim 12 (and claims 8-11 and 13-17 dependent thereon) under 35 U.S.C. §103(a) as obvious under Alexander in view of Smolders. (Action at pages 5-12).

Independent claim 12 recites an apparatus including "an analyzing section, when an interrupt is generated by execution of a branch instruction during execution of said program, obtaining a branch source address and a branch destination address from a source of said interrupt, and identifying a type of said branch instruction by obtaining a instruction code from said branch source address and decoding said instruction code; and a collecting section obtaining said branch source address, said branch destination address, and a identified result from said analyzing section when the identified instruction is a calling instruction or a return instruction of said subroutine. . . "

With respect to claim 12, the Action concedes that Alexander "does not disclose identifying a type of said branch instruction by obtaining an instruction code from said branch source address and decoding said instruction code." (Action at page 9). Nevertheless, the Examiner rejects claim 12 and contends that this feature is discussed by Smolders in col. 4 lines 1-6 and that "instruction codes are inherently decoded in order to distinguish between brand instructions and non-branch instructions." (Action at page 9).

***Prima Facie* Obviousness Not Established**

Features Not Described By Cited Art Alone Or In Combination

As provided in MPEP §2143.03 "To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F. 2d 1981, (CCPA 1974). Applicants submit that Smolders does not discuss identifying a type of branch instruction but merely (col. 4, lines 1-6) discusses what occurs "when a branch is found, the flow of execution process proceeds."

Examiner's Contention of Inherency Unsupported

In addition, the Examiner has not provided any support for such an inherency argument. As set forth in MPEP 2112:

To establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.' " *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999)

That is, the Examiner does not provided the required in rejecting the claim.

No Motivation To Combine The Cited Art In The Manner Proposed By The Examiner

In addition Applicants submit there is no motivation to combine the art in a manner as suggested by the Examiner.

The Examiner contends that it would have been obvious to "use a branch interrupt as taught by Smolders in place of the timer interrupt disclosed by Alexander for the purpose of enabling tracing and profiling without introducing overhead or modifying the program code. Applicants respectfully submit however, that it is understood in the art that such a combination would in itself require a modification of program code.

Conclusion

Since *prima facie* obviousness is not established and the Examiner's contention of inherency is unsupported, the rejection should be withdrawn and claims 8-17 allowed.

ITEM 9: REJECTION OF CLAIMS 19-28 AND 30-39 UNDER 35 U.S.C. §103(a) UNDER ALEXANDER IN VIEW OF SMOLDERS

The Examiner rejects independent claim 23 (and claims 19-22 and 24-28 dependent thereon) and independent claim 34 (and claims 30-33 and 35-39 dependent thereon). (Action at pages 14-19).

Independent claim 23 recites a computer readable medium storing a program for a computer executing a process for collecting a profile of a subroutine included in a target program, by "obtaining a branch source address and a branch destination address from a source of an interrupt when interrupt is generated by execution of a branch instruction during execution of the target program; identifying a type of said branch instruction by obtaining a instruction code from said branch source address and decoding said instruction code. . . "

Independent claim 34 recites a method for collecting a profile of a subroutine included in a program including "obtaining a branch source address and a branch destination address from a source of an interrupt when the interrupt is generated by execution of a branch instruction during execution of said program; identifying a type of the branch instruction by obtaining a instruction code from the branch source address and decoding the instruction code. . . "

With respect to independent claims 23 and 34, the Action concedes that Alexander "does not disclose identifying a type of said branch instruction by obtaining an instruction code from said branch source address and decoding said instruction code." (Action at page 15).

Nevertheless, the Examiner rejects claims 23 and 34 and contends that these features are discussed by Smolders in col. 4 lines 1-6 and that "instruction codes are inherently decoded

in order to distinguish between brand instructions and non-branch instructions." (Action at page 9).

***Prima Facie* Obviousness Not Established**

Features Not Described By Cited Art Alone Or In Combination

Examiner's Contention of Inherency Unsupported

No Motivation To Combine The Art

As discussed above, Applicants submit that Smolders does not discuss identifying a type of branch instruction but merely that a branch instruction exists. In addition, the Examiner has not provided any support for an inherency argument. Further, a combination of the art in itself would require code modification.

Conclusion

Since *prima facie* obviousness is not established and the Examiner's contention of inherency is unsupported, the rejection should be withdrawn and claims 19-28 allowed.

NEW CLAIMS

New dependent claim 40 recites an apparatus "wherein the collecting section generates a control table corresponding to each executor of the subroutine on the storage unit, wherein the control table includes an executor managing table, a subroutine managing table, and a calling managing table."

New dependent claim 41 recites a computer readable medium "wherein the computer further executes the process by generating a control table corresponding to each executor of the subroutine on the storage unit, wherein the control table includes an executor managing table, a subroutine managing table, and a calling managing table."

New dependent claim 42 recites a method "generating a control table corresponding to each executor of the subroutine on the storage unit, wherein the control table includes an executor managing table. . . "

New claims 40-42 patentably distinguish over the cited art for the features recited therein.

CONCLUSION

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge

the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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